# MATERIAL SAFETY DATA SHEET

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|---|---|---|
| **Reference No**..... | : | WTX19S12084226B004 |
| **Applicant**..... | : | SYSMAX Innovations Co., Ltd. |
| **Address**..... | : | Rm 2601-06, Central Tower, NO.5 Xiancun Road, Tianhe District, Guangzhou,510623, Guangdong, China |
| **Manufacturer**..... | : | Huizhou Meinovo Energy&Technology Co.,Ltd |
| **Address**..... | : | Liwu Industrial Area, Yuanzhou Town, Boluo County, Huizhou, China |
| **Sample's name**..... | : | High Performance USB-C Rechargeable Battery |
| **Date of Issue**..... | : | 2020-03-16 |

**Prepared By:**

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# Material Safety Data Sheet

## Section 1-Chemical Product and Company Identification

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|---|---|
| **Product Name:** | High Performance USB-C Rechargeable Battery |
| **Model No.:** | NL2140R |
| **Ratings** | 3.6V, 4000mAh, 14.4Wh |
| **Weight:** | Approx.74.2g |
| **Manufacturer:** | Huizhou Meinovo Energy&Technology Co.,Ltd |
| **Address:** | Liwu Industrial Area, Yuanzhou Town, Boluo County, Huizhou, China |
| **EmergencyTelephone:** | +86-0752-6982776 |
| **Fax:** | +86-0752-6982776 |
| **Email:** | sales2@meinovo.com |

## Section 2-Hazards Identification

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|---|---|
| **Classification:** | Not dangerous with normal use. Do not dismantle、open or shred battery. The hazards indicated are for a ruptured battery.Exposure to the ingredients contained within or their ingredients products could be harmful. |
| **Appearance, Color and odor** | Solid object with no odor, no color. |
| **Invasionroute:** | **ACUTE**: see Section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns. |
| | **Skincontact:**Theleakageoftheelectrolytemaycausesoreandstimulationontheskin |
| | **Eyecontact**:Thesteamoftheelectrolytemaystimulateeyes.Especially,substancethatmaycauseinflammationoftheeyesiscontained |
| | **Inhalation:**Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation. |
| | **Ingestion:**Swallowingisnotanticipatedduetothebatterysize.Theingestionoftheelectrolytecausestissuedamagetothroat |
| **Health hazards:** | Forthebattery or cell,chemicalmaterialsarestoredinasealedmetalormetallaminatedplastic case, which designedtowithstandtemperaturesandpressuresencounteredduring normaluse.Asaresult,duringnormaluse,thereisnophysicaldangerofignition,explosionorleakageofhazardousmaterials.However,ifexposedtoafire,addedmechanicalshocksordecomposed,theseimproper handlingswouldcausetheleakageofelectrolyte.Moreover,ifheatedstronglybythesurroundingfire,acrid gasmaybeemitted |
| **Environment hazards:** | Electrolyteleakageorbatterycontainerrupturemayleadtotheleakageofinnercomponentintotheenvironment |
| **Burn&burstdanger:** | Donotdisposeofbattery in fire--mayexplode.Donotshort-circuitthebattery—maycausefire |

## Section3–Composition/informationonIngredient

Pure ☐Admixture☒

| Chemical Composition | Molecular Formula | CAS No. | Weight ( % ) |
|---|---|---|---|
| Lithium Cobalt Oxide (LiCoO2) | $CoLiO_2$ | 12190-79-3 | 39.64 |
| Aluminum Foil (Al) | Al | 7429-90-5 | 5.54 |
| Poly Vnylidene Fluoride PVDF(-[-CH2-CF2-]-n) | $C_2H_2F_2$ | 24937-79-9 | 1.71 |
| Graphite (C) | C | 7782-42-5 | 23.19 |
| Copper (Cu) | Cu | 7440-50-8 | 9.7 |
| Styrene-Butadiene Rubber | $C_{12}H_{14}$ | 9003-55-8 | 1.25 |
| Phosphate(1-), hexafluoro-, lithium | $F_6LiP$ | 21324-40-3 | 15.4 |
| Polyethylene | $(C_2H_4)n$ | 9002-88-4 | 0.05 |
| Polypropylene | $(C_3H_6)n$ | 9003-07-0 | 0.8 |
| Electrolyte Carbonate | $C_3H_4O_3$ | 96-49-1 | 2.72 |

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

## Section4–FirstAidMeasure

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| **Skintouch:** | Remove all contaminated clothing and flush extraneous matter with soap and plenty of water immediately for at least 15 minutes. Get medical aid. |
| **Eyestouch:** | In case of contact electrolyte with eyes, rinse immediately with plenty of water. Have the victims remove contact lenses if he is wearing them before rinsing. Do not let the victims rub his eyes. Get medical aid. |
| **Inhalation:** | Removetofreshair.Giveoxygenorartificialrespirationifneeded.Getmedicalaid. |
| **Ingestion:** | Swallowing is not anticipated in normal condition. If accidentally eat theproduct, dilute by giving plenty of water and get medical aid. Assure that mucus does not obstruct the airway. Do not give anything by mouth to an unconscious person |

## Section5–FireFightingmeasures

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| **Dangercharacteristic:** | Non-flammable.Thebatteriescanleakcombustibleelectrolytefumesincaseofoverheatresultingfrominappropriateuse. |
| **Hazardouscombustionproducts:** | Irritantgasmaybeemittedifburnedorexposedtofire |
| **Hazardouscombustionproducts:** | Irritantgasmaybeemittedifburnedorexposedtofire |
| **Fire-Fighting method & media:** | Thestaffmustequippedwithfiltermask(fullmask)orisolatedbreathingapparatus.Thestaffmustweartheclothesandgloveswhichcandefendthefireandthetoxicgas.Whenthebatteryburnswithothercombustiblessimultaneously,takefire-extinguishingmethodwhichcorrespondtothecombustibles.Extinguishafirefromthewindwardasmuch aspossible |
| **Extinguishant:** | Carbondioxide,drychemical,foam,etc |

## Section6–AccidentalReleaseMeasures

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|---|---|
| **Personal precautions** | Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| **Other Information** | Refer to protective measures listed in section 7 and 8. |
| **Environmental precautions** | Refer to protective measures listed in Section 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. |
| **Methods for containment** | Prevent further leakage or spillage if safe to do so. |
| **Methods for cleaning up** | Pick up and transfer to properly labeled containers. |

## Section7–Handingandstorage

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|---|---|
| **Handing:** | Beforehandlingthebatteries,theusersshouldreadtheproductspecificationcarefully.Donotcrush,piercethebatteryterminals withconductivegoods.Notdirectlyheatorsolder.Donotthrowinfire.Donotmixbatteriesofdifferenttypes.Donotmixnewandusedbatteries.Keepbatteriesinnon-conductivetrays |
| **Storage:** | Storebatteriesincoolandventilatedareaawayfromsourcesofheat,openflames,corrosivechemicals,foodanddrink.Since shortcircuitcancauseburn,leakageandrupture,keepbatteries inoriginalpackaginguntiluseanddonotjumblethem.Keepawayformchildren |

## Section8–Exposurecontrols,PersonalProtection

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|---|---|
| **Maximumadmissibleconcentration:** | Noinformationisavailable |
| **MonitoringMethod:** | Useventilationorothermonitoringdevicestocontroltemperature,humidityandfumes |
| **EngineeringControl:** | Useventilationorothermonitoringdevicestocontroltemperature,humidityandfumes |
| **RespiratoryProtection:** | Notnecessaryundernormaluse.Incaseofbatteryrupture,useself-containedrespiratoryequipment |
| **Eyes/faceProtection:** | Notnecessaryundernormaluse.Wearsafetygogglesifhandingaleakingorrupturedbatteries |
| **Skin and Bodyprotection:** | Notnecessaryundernormaluse.Userubberapronandprotectiveclothesincaseofhandingaleakingorrupturedbatteries |
| **HandsProtection:** | Notnecessaryundernormaluse.Userubberglovesifhandingaleakingorrupturedbatteries |
| **Hygiene Measures:** | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Contaminate work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. |
| **OtherProtections:** | None |

## Section9–PhysicalandChemicalProperties

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|---|---|
| **Physical state:** | Solid |
| **Color:** | Yellow |
| **Odor:** | Noinformationisavailable |
| **pHValue:** | Notavailable |
| **Boilingpoint /range** | Notavailable |
| **Melting /freezingPoint:** | Notavailable |
| **Flashpoint:** | Notavailable |
| **Evaporation rate:** | Notavailable |
| **Upperflammable (explosive)limitsi nair-Lower(vol%)-UEL:** | Notavailable |
| **Vaporpressure:** | Notavailable |
| **Vapordensity:** | Notavailable |
| **Specific Gravity:** | Notavailable |
| **Water Solubility:** | Immiscible in water |
| **Solubility in other solvents:** | Notavailable |
| **Partitioncoefficie nt(n-octanol/water):** | Notavailable |
| **Autoignition temperature** | Notavailable |
| **Decomposition temperature:** | Notavailable |
| **Kinematic viscosity:** | Notavailable |
| **Dynamic viscosity:** | Notavailable |
| **Explosive properties:** | Notavailable |
| **Oxidizing properties:** | Notavailable |
| **Evaporationrate:** | Notavailable |
| **Ignitiontemperat ure:** | Noinformationisavailable |
| **Anyadditioninfor mation:** | None |

## Section10–StabilityandReactivity

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|---|---|
| **Reactivity:** | No data is available |
| **Chemical stability:** | Stable under recommended storage condition |
| **Possibility of Hazardous Reactions:** | None under normal processing. |
| **HazardousPolymerization:** | Noinformationisavailable |
| **Conditions to avoid:** | Exposure to air or moisture over prolonged periods. |
| **Incompatible materials** | Acids, Bases, Oxidizing agent. |
| **HazardousDecompositionProducts:** | Irritantgasmaybeemittedifburnedorexposedtofire |

## Section11–ToxicologicalInformation

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|---|---|
| **AcuteToxicity:** | Noinformationisavailable |
| **Sub-acuteandChronicToxicity:** | Lithiumionbatteriesdonotcontaintoxicmaterials |
| **Irritation:** | Irritationonlyoccursifthebatteriesareabusedanditmaycauseirritationtoskin,eyes,respiratorytract. |
| **Sensitization:** | Noinformationisavailable |
| **Mutagenicity:** | Noinformationisavailable |
| **Carcinogenicity:** | Noinformationisavailable |
| **Others:** | None |

## Section12–EcologicalInformation

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|---|---|
| **Eco-toxicity:** | Whenproperlyusedanddisposed,lithiumironbatteriesdonotpresentenvironmenthazard |
| **Biodegradable:** | Noinformationisavailable |
| **Non-biodegradable:** | Noinformationisavailable |
| **Bioconcentrationorbiologicalaccumulation:** | Noinformationisavailable |
| **Otherharmfuleffects:** | None |

## Section13–DisposalConsiderations

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|---|---|
| **Natureofwaste:** | Noinformationisavailable |
| **Wastedisposalmethods:** | Disposeinaccordancewithapplicableregulationswhichvaryfromcountrytocountry.Inmorecountriesthediscardofusedbatteriesisforbiddenandtheend-usersareinvitedtodisposethemproperly.Lithiumion batteryshouldhavetheirterminalsinsulated andbepreferablywrapped inplasticbagspriortodisposal |
| **Contaminated Packaging:** | Dispose of contents/containers in accordance with local regulations. |
| **Attentionabandoned:** | Incinerationshouldneverbeperformedbybatteryuser |

## Section14-Transportinformation

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| **Note:** | This report applies to transportation of by air or by sea or by road.<br>The High Performance USB-C Rechargeable BatteryNL2140Rhas passed the test Section 38.3 of Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria.<br>Report No.: WTX19S12084226B001<br>The transportation of lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code. |

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| | When shipped by air, package should according to packing instruction 965~967 of IATA DGR 61st Editionfortransportation.<br>When shipped by sea, package should according to special provision 188 of IMDG CODE 39-18 Editionfortransportation.<br>When shipped by road, package should according to special provision 188 of ADR2020 Editionfortransportation. |
| **UNNumber:** | **3480/3481** |
| **Class:** | / |
| **Packinggroup:** | II/IB |
| **Propershippingname:** | Lithium Ion Batteries/Lithium Ion Batteries Contained In Equipment/Lithium Ion Batteries Packed With Equipment |
| **PackagingMark:** | Each package must be labeled with a lithium battery label. |
| **PackagingMethod:** | Noinformationisavailable |
| **Transport Fashion:** | Byair /By sea/By road |
| **Transport Attentions:** | Examinewhetherthepackageof thecontainers are integrateand tight-closedor notbeforetransport.Nodivulgence,nocollapse,noprecipitationornodamageduringthecourseoftransportation.Don't putthegoodstogetherwithcorrosivechemicals.Stopoversshouldbeawayfromfireandheatsources |

## Section15–RegulatoryInformation

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|---|---|
| **RegulatoryInformation:** | ISO11014-2009Safetydatasheetforchemicalproducts–Contentandorderofsections.<br>GB/T16483-2008Safetydatasheetforchemicalproducts–ContentandorderofsectionsTheinternationalMaritimeDangerousGoods(IMDG)Code<br>InternationalAirTransportAssociation(IATA)DangerousGoodsRegulations,61st,2020.<br>TheEuropeanAgreementconcerningtheInternationalCarriageofDangerousGoodsbyRoad(ADR)<br>TheRegulationsConcerningtheInternationalTransportofDangerousGoodsbyRail(RID)<br>U.S.DepartmentofTransportation(DOT)<br>GloballyHarmonizedSystemofClassificationandLabelingofChemicals(GHS) |

## Section16–AdditionalInformation

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|---|---|
| **Additional Information:** | Theaboveinformationisbasedonthedataofwhichweareawareandisbelievedtobecorrectasofthedatahereof. Sincethisinformation may beappliedunderconditionsbeyondourcontrolandwithwhichmaybeunfamiliarandsincedatamadeavailablesubsequenttothedatahereofmaysuggestmodificationsoftheinformation,wedonotassumeanyresponsibilityfortheresultofitsuse.Thisinformationisfurnisheduponconditionthatthepersonreceivingitshallmakehisowndeterminationofthesuitabilityofthematerialforthisparticularpurpose |

====== End of Report ======